

**Table A10. World carbon dioxide emissions by region, Reference case**

million metric tons carbon dioxide

Region	2020	2025	2030	2035	2040	2045	2050	Average annual percentage change, 2020–2050
<b>OECD</b>								
<b>OECD Americas</b>	<b>5,651</b>	<b>5,838</b>	<b>5,817</b>	<b>5,850</b>	<b>5,965</b>	<b>6,134</b>	<b>6,312</b>	<b>0.4</b>
United States	4,552	4,612	4,573	4,542	4,585	4,680	4,796	0.2
Canada	547	596	597	616	650	682	710	0.9
Mexico and other OECD Americas	552	629	647	692	730	772	806	1.3
<b>OECD Europe</b>	<b>3,593</b>	<b>3,731</b>	<b>3,606</b>	<b>3,572</b>	<b>3,576</b>	<b>3,602</b>	<b>3,671</b>	<b>0.1</b>
<b>OECD Asia</b>	<b>2,252</b>	<b>2,293</b>	<b>2,264</b>	<b>2,250</b>	<b>2,217</b>	<b>2,149</b>	<b>2,104</b>	<b>-0.2</b>
Japan	1,089	1,108	1,059	1,034	995	926	864	-0.8
South Korea	756	786	807	808	808	803	807	0.2
Australia and New Zealand	407	399	398	408	415	421	432	0.2
<b>Total OECD</b>	<b>11,496</b>	<b>11,863</b>	<b>11,687</b>	<b>11,672</b>	<b>11,757</b>	<b>11,885</b>	<b>12,087</b>	<b>0.2</b>
<b>Non-OECD</b>								
<b>Non-OECD Europe and Eurasia</b>	<b>2,930</b>	<b>3,001</b>	<b>3,086</b>	<b>3,220</b>	<b>3,325</b>	<b>3,425</b>	<b>3,509</b>	<b>0.6</b>
Russia	1,861	1,949	2,013	2,099	2,157	2,203	2,232	0.6
Other Europe and Eurasia	1,068	1,052	1,074	1,120	1,168	1,221	1,277	0.6
<b>Non-OECD Asia</b>	<b>15,534</b>	<b>16,982</b>	<b>17,528</b>	<b>18,547</b>	<b>19,516</b>	<b>20,561</b>	<b>21,169</b>	<b>1.0</b>
China	10,911	11,071	10,760	10,705	10,628	10,569	10,497	-0.1
India	2,136	2,872	3,358	4,086	4,800	5,495	5,809	3.4
Other Asia	2,488	3,038	3,410	3,756	4,088	4,497	4,863	2.3
<b>Middle East</b>	<b>2,027</b>	<b>2,270</b>	<b>2,277</b>	<b>2,261</b>	<b>2,340</b>	<b>2,403</b>	<b>2,428</b>	<b>0.6</b>
<b>Africa</b>	<b>1,250</b>	<b>1,418</b>	<b>1,528</b>	<b>1,668</b>	<b>1,787</b>	<b>1,889</b>	<b>2,046</b>	<b>1.7</b>
<b>Non-OECD Americas</b>	<b>1,106</b>	<b>1,265</b>	<b>1,307</b>	<b>1,369</b>	<b>1,447</b>	<b>1,527</b>	<b>1,600</b>	<b>1.2</b>
Brazil	503	593	607	620	627	643	656	0.9
Other Non-OECD Americas	603	672	700	749	820	884	944	1.5
<b>Total Non-OECD</b>	<b>22,847</b>	<b>24,935</b>	<b>25,727</b>	<b>27,064</b>	<b>28,415</b>	<b>29,805</b>	<b>30,752</b>	<b>1.0</b>
<b>Total World</b>	<b>34,343</b>	<b>36,797</b>	<b>37,414</b>	<b>38,736</b>	<b>40,172</b>	<b>41,690</b>	<b>42,839</b>	<b>0.7</b>

Sources: U.S. Energy Information Administration (EIA), World Energy Projection System (2021), run r\_210719.163829; and EIA, *Annual Energy Outlook 2021*, (February 2021), [www.eia.gov/aeo](http://www.eia.gov/aeo)

Notes:

\* Values presented are gross CO<sub>2</sub> emissions; CO<sub>2</sub> captured by CCS, accounting for less than 0.2% of the 2050 world total, is not subtracted

\* Totals may not equal sum of components due to independent rounding.